

THE INSANE ROOT.

THE PRESIDENTIAL ADDRESS DELIVERED AT THE ONE HUNDRED AND
TWELFTH ANNUAL MEETING OF THE ASSOCIATION ON WEDNESDAY
8 JULY, 1953.

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THE first duty of your President is to say thank you and this I do with great sincerity. To be elected President of this historic association is indeed an honour, and I very much appreciate it.

Having been your Editor-in-Chief for many years it has been my privilege to edit the presidential address each year with due respect to the President, and then correct the galley-proof and the paged proof, so that by the time you read it in the *Journal* I have seen enough of it. Now in my own case, in addition to all this, I have to write it, which, of course, implies choosing a subject. To a President-elect who cares to look through the yearly volumes of the *Journal of Mental Science*, it must soon be apparent that there are very few subjects left untouched, and so he turns in despair to his own imagination. I turned not in despair but with a measure of relief, indeed with a cheerful heart, for I said to myself I will appear to the assembled multitude not as a psychiatrist at all, but as a bibliophile with a botanical bias and a superficial contact with psychiatry, and that to some extent through witchcraft and superstition; indeed you may come to regard me (temporarily I hope) as a mountebank or quack.

I have entitled my presidential address "The Insane Root," quoting Shakespeare's "Macbeth" where Banquo says:

"Were such things here as we do speak about?
Or have we eaten of the insane root
That takes the reason prisoner?"

The insane root, of course, is the mandrake or mandragora, and there are several allusions to it in Shakespeare's plays. In "Antony and Cleopatra" Cleopatra exclaims:

"Give me to drink mandragora,
That I might sleep out this great gap of time
My Antony is away."

In "Othello," Iago remarks:

"Not poppy, nor mandragora,
Nor all the drowsy syrups of the world,
Shall ever medicine thee to that sweet sleep
Which thou owest yesterday."

Marlowe in "The Jew of Malta" mentions mandrake, for Barabas on being asked "Didst break prison?" replies :

" I drank poppy and cold mandrake juice ;
And being asleep, belike they thought me dead,
And threw me o'er the walls."

Webster in his "Duchess of Malfi" says :

" Come violent death,
Serve for mandragora, to make me sleep,"

and again,

" I have this night digg'd up a mandrake
And I am gone mad with't."

Mandragora mas. 301
Alraun mennke.



FIG. 1.—A mandrake plant from the Herbal by Fuchs, *De Historia Stirpium*, Basle, 1545.

What I shall say to you will only be a very small fraction of a very big subject. I shall only scratch the surface, and those of you who are sufficiently interested will find matter for many hours of delightful study if you delve deeper.

The word mandrake is probably derived from the Latin *mandragoras*, or possibly from the two Sanscrit words *mandros*, sleep and *agora*, or substance, the word then meaning the sleep-producing substance. John Parkinson in his *Theatrum Botanicum*, published in 1640, speaks of mandrakes and woman-drakes for the so-called male and female of the plant. The mandrake, *Mandragora officinarum* L., belongs to the potato family, the Solanaceae, and grows mostly in the Mediterranean area. It has a short stem with a tuft of ovate leaves and a thick, fleshy and often branched root. The purple bell-shaped flowers are solitary, and give rise to a fleshy orange-coloured berry. Various parts of the plant were used, the leaves, the rind of the root, the fruit, the root

itself and the juice of the crushed root or fruit, the former being regarded as the more powerful. The mandrake has been used as a narcotic to produce sleep for well over two thousand years, and is mentioned in certain texts on Assyrian clay tablets some seven hundred years before the Christian era. It was originally used for convulsions, for those oppressed with the "black choler" or melancholia, and in the treatment of insanity, mostly with a view to inducing sleep. At the same time the drug caused mental symptoms, so that Hippocrates advises "administer less of the drug than causes madness." Macrobius refers to it as a remedy for insomnia. It was also used as an anodyne, the heavy stupor which was induced rendering the person insensible to pain,

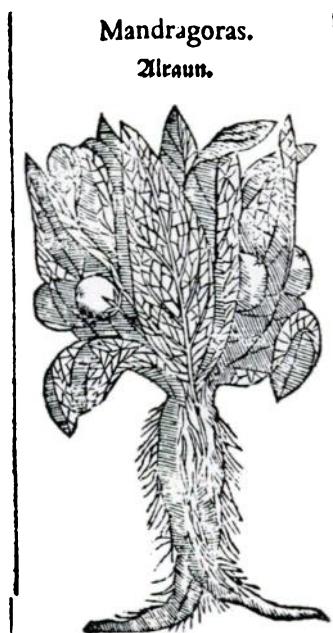


FIG. 2.—A mandrake plant from the Polish Herbal of Syrennius, Cracow, 1613.

and so it became the first anaesthetic to be used before surgical operations. Pliny goes so far as to say that with some persons the odour of wine of mandragora is quite sufficient to produce sleep. The wine, known as morion or "death wine" is said to have been given in Roman times to those being tortured or subjected to prolonged or painful death. When crucifixion was a Roman punishment it was the custom of women to visit the prisoners on the cross and to administer to them a sponge charged with morion. It has been suggested by Lyman that this "death wine," in which mandragora and myrrh formed ingredients, was the same as that offered to Jesus Christ during his agonies on the Cross. Several writers between the fifth and eleventh centuries state that half an ounce or so of mandragora wine will render a person insensible to the pain of amputation.

The gathering of the mandrake appears to have given rise to considerable difficulties as various superstitions came into play. Folk-lore contains a

number of references to the dangers of gathering different plants, particularly mandrake, and to the ceremonies attached to the gathering.

Shakespeare makes a reference to these in "Romeo and Juliet":

"What loathsome smells,
And shrieks like mandrakes torn out
of the earth,
That living mortals, hearing them, run mad,"

and again in "King Henry VI," the lines by Suffolk,

"Would curses kill, as doth a mandrake's groan
I would invent as bitter—searching terms
As curst, as harsh and horrible to hear."



FIG. 3.—Heuresis, the goddess of Discovery presenting Dioscorides with a mandrake; the dead dog is at her feet. From the 6th century "Anicia" MSS of Dioscorides in Vienna.

Ben Jonson in his "Masque of Queens" says:

"I last night lay all alone
On the ground, to hear the mandrake groan;
And plucked him up, though he grew full low
And as I had done, the cock did crow."

Michael Drayton in his "Nymphal" says:

"By the mandrake's dreadful groans."

The Arabs called the mandrake the "Devil's Candle," and to the light shown by the plant, Moore alludes in "Lalla Rookh":

"Such rank and deadly lustre dwells
As in those hellish fires that light
The mandrake's charnel leaves at night,"

and again :

“ The phantom shapes—Oh touch them not
That appals the maiden's sight,
Look in the fleshy mandrake's stem
That shrieks when plucked at night.”

The light that was supposed to be emitted by the mandrake leaves was due to the glow-worms that settled on the leaves of the plant.

The dangers that were supposed to be inherent in attempting to gather the mandrake were quite obviously due to the belief in devils which lived in the plant and would take the life of the person who tried to dig it up. The belief in devils living in trees and plants was a common one in the Middle Ages, and many ceremonies were devised to protect man by magical means against the evil that would befall him. The mandrake should be gathered by night,



FIG. 4.—Heuresis, the Goddess of Discovery holding a mandrake for an artist to draw it, while Dioscorides writes a description of it in a book. From the 6th century "Anicia" MSS. of Dioscorides in Vienna.

on a Friday or in the month of May. The gatherer should stand with his back to the wind. The making of three magic circles round the plant with a sword was a common practice. Almost invariably a dog was used to up-root the plant ; by this means the anger of the demon was vented on the poor dog, which was killed by the demon. The dog was tempted by a piece of meat after it had been attached to the plant, and in straining to get the meat it uprooted the plant, which screamed, and the dog died on the spot, or at sunrise. The mandrake gatherer was advised to stop his ears with wax so that he should not hear the scream of the mandrake. In some cases the directions for gathering the plant include instructions for washing the root in running water for a day and a night to wash away the devilish taints. The drawing of the circle round the plant before digging it up is thought by some to be derived from the ancient symbol of the serpent with its tail in its mouth.

Apparently a similar ceremony was used in gathering the hellebore, which is stated "soon maketh the head heavy."

John Goodyer between 1652-1655 wrote out an interlinear translation of the *Materia Medica* of Dioscorides. Of mandrake Dioscorides says :

"But of ye male, and white which some have called Norion, ye leaves are greater smooth as of the beet, but ye apples twice as big drawing to saffron in ye colour ; sweet smelling with a certain strongness which also ye shepherds eating are in a manner made asleep, but ye root is like to that before it. Some do seeth the roots in wine to thirds, and straining it set it up, using a cyathus of it for such as cannot sleep, or are grievously pained and upon whom being cut or cauterized they wish to make a not-feeling pain. Ye juice being drunk ye muchness of ye quantity

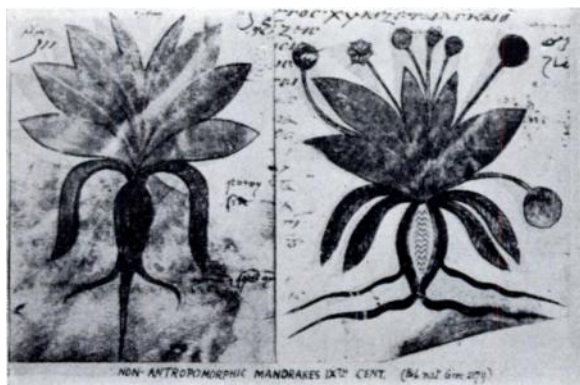


FIG. 5.—Two non-anthropomorphic mandrakes from IXth century manuscripts.

of two oboli with melicrate, doth expel upward phlegm and black choler, as ellebore doth, but being drunk too much it drives out ye life."

Apuleius Barbarus (not to be confused with Apuleius of 'Golden Asse' fame), wrote a herbal somewhere between A.D. 1000-1050. He had a wide knowledge of herbs and their properties, or "wort-cunning," and in his herbal he writes of mandrake :

"This wort which is named mandragoras, is mickle and illustrious of aspect and it is beneficial. Thou shalt in this manner take it, when thou comest to it, then thou understandest it by this that it shineth at night altogether like a lamp. When first thou seest its head, then inscribe thou it instantly with iron, lest it fly from thee : its virtue is so mickle and so famous, that it will immediately flee from an unclean man when he cometh to it, hence as we before said, do thou inscribe it with iron and so shalt thou delve about it as that thou touch it not with the iron, but thou shalt earnestly with an ivory staff delve the earth. And when thou seest its hands and its feet, then tie thou it up. Then take the other end and tie it to a dog's neck, so that the hound

be hungry, next cast meat before him so that he may not reach it, except he jerk up the wort with him. Of this wort it is said that it hath so mickle might, that what thing soever tuggeth it up, that it shall soon in the same manner be deceived. Therefore, as soon as thou see that it be jerked up, and have possession of it, take it immediately in hand and twist it and wring the ooze out of its leaves into a glass ampulla or pitcher, and when need come upon thee, that thou shouldst therewith help any man, then help thou him in this manner. For headache and in case that a man may not sleep, take the ooze, smear the forehead, and the wort also in the same manner relieveth the headache, and also thou wondrest how quickly the sleep cometh. For witlessness,



FIG. 6.—A male mandrake from a Xth century manuscript from Dioscorides in the Pierpoint Morgan Collection.

that is for devil sickness or demoniacal possession, take from the body of this same wort mandrake, by weight of three pennies, administer to drink in warm water, as he may find most convenient ; soon he will be healed. If any see some heavy mischief in his home, let him take this wort mandragoras into the middle of the house, as much of it as he then may have by him, he compelleth all evils out of the house."

The *Grete Herball*, which was the first illustrated British herbal, was published in 1526 with subsequent editions in 1529, 1539 and 1561. It was a translation from the French *le Grant Herhier*, which first appeared at Besançon in 1486 as *Arbolayre*—this in its turn was a translation from a Latin manuscript called *Circa instans*, which is attributed to Platearius.

Under the heading mandragora appears the following :

"Mandrake is colde and drye. There be two maners, the male and the female and the female hath fharpe leues. Some fay that it is better for medycyne than the male, but we ufe of bothe. Some fay that the male hath fygure or fhape of a man, and the female of a woman, but

that is fals. For nature never gave forme or flape of makynde to an herbe. But it is of troughe that fome hath flaped fuche fygures by craft as we have fontyme herde fay of laboures in the felde. The rynde of ye rote of mandrake is pryncypally good for ufe in medycyne. The fruyte next. And thyrdly ye leues. The rynde of the rote of mandragora may be kept two yeres in vertue and fo lōge it may be ufed in medycyns. It hath myght to hele, to ftaunche and fomewhat to mortyfye and to caufe flepe.

“To caufe one to flepe in a fever ague contyct the rynde of mandrake with womans mylke and whyte of an egge and lay it to the forehead and temples.

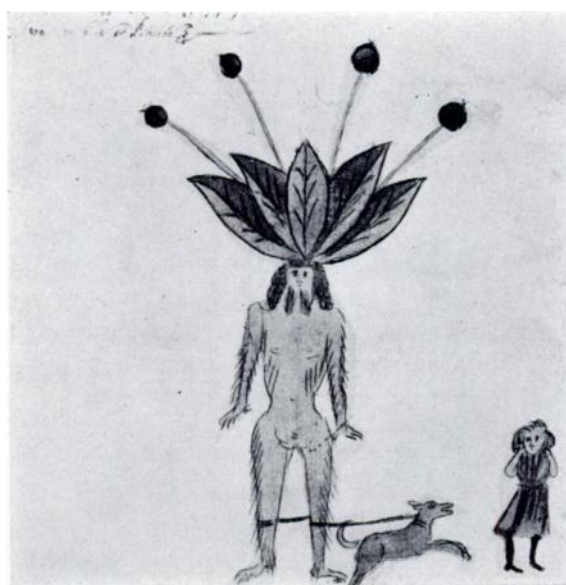


FIG. 7.—A dog attached to a mandrake and a little girl stopping up her ears.
From a North Italian manuscript *circa* 1450.

“For the payne of the heed caufed of heet. Stampe the leues and lay them on the temples and anoynte the heed with oyle that is made in this maner. Brufe the apples of this herbe mandragora and lay it a grete whyle in oyle, and than feythe it a lytell and whan it is ftreyned it is called oyle of mandrake. It is mervaylous good to caufe flepe and helpeth agaynft payne of the heed yf it be caufed of heate anoynted therwith about the temples and foreheed.”

Willam Bullein in his “Bulwarke of Defence againft all Sickneffe, Soareneffe and Woundes that doe dayly, affaulte mankinde” sets out his ‘Booke of Simples’ in the form of a dialogue between Marcellus who asks the questions and Hilarius who gives the answers. Speaking of mandrake Hilarius says :

“Many fuperfticious and foolifhe thynges have bin devifed of thys herbe: a very invencion of Wytches and Hypocrites, through the

fuggeftion and motion of the devill, to delude the weake hart of man-kynde wythall. For they doe affyrme, that this herbe cometh of the feede of fome convicted dead men : and alfo, without the death of fome lyving thinge, it cannot be drawn out of the earth to mans ufe. Therefore, they did tye fome Dogge, or other lyving beaft unto the roote thereof wyth a corde, and digged the earth in compaffe rounde about, and in the meane tyme ftopped their own eares, for feare of the terreble fhriek, and cry of thys mandrack. In whych cry, it doth not only dye itfelfe, but the feare thereof kylleth the Dogge or Beaft, whych pulled it out of the earth. And this hearbe is called alfo *Anthropomorphos* becaufe it beareth the Image of a man, and that is



FIG. 8.—A mandrake from the First Edition of the "Gart der Gesundheit," Mainz, 1485.

falfe. For no herbe hath the fhape of a man or woman, no truly, it is not naturall of his owne growing, but by the crafty invention of fome falfe men, it is done by arte. As many rootes may be made in the formes of men, foules and beaftes and fecretly covered in the earth : which when they are found by the crafty hyder thereof, the beholders be dryven into no fmall admiration and wounder, fupposing there by that fome ftraunge fearefull thing, fhall quickly followe the fame. The difcription of this Mandracke as I have fayd was nothing, but the impofterous fubtilty of wicked people. Perhaps of Fryers or fuperftitious monkes, whych have wrytten thereof at length. . . . But there is an herbe called Mandracke, whofe leaves be large and long, lyke unto large Lettice : whofe apples be in the forme of Cherries, very colde . . . This herb hath a long large roote, with two Legges in forme, one wrapped about the other : and fine rootes like hayre, growing upon it. But no armes, feete, fingers, handes, head, nor ftalkes, but ye

leaves creepe out of the ground : of whych herbe be two kindes, male and female, the male greater than the female. This herbe is cold in the thirde degree and hath vertue to caufe deepe sleepe : the strength is in the Apple, and in the rynde of the roote . . . The juyce of thys herbe preffed forth and kept in a clofe earthen vefsell, according to arte, bringeth sleepe and casteth men into a trans on a deepe terrible dreame, untill he be cut of the ftone. This herbe foddren in Wyne unto the thirde parte doth purge black choller as well as *Elleborus niger* will do . . . if the roote be cut in fundry places, there wyll come forth a worthy juyce to anoynt the forehead, to bring sleepe. . . . Two halfpenny waight of the powder of the rynde thereof, may



FIG. 9.—A mandrake from the First Edition of Le Grant Herbier called "Abrolayre," Besançon, 1486.

be drunke in fweete water for the Kynges evil or lacke of sleepe. The juyce thereof with oyle and hony, healeth wōdes : and thus I end of Mandrack, whych in old tyme, it was called *Circaeum* of Wytches, whych had vertue (fayd they) or craft to tranfforme, both man, beaft and herbe out of kynde. Among all other, they wrought wonders by this herbe, to provoke, bewitch or cast men into mad blynd fantasies, or frēfes, called Love, whych rather may be termed, noyfome beaftly luft, and when it is wrought by herbes, foolifhneffe."

In his 'Booke of Compoundes,' there is another dialogue between Sickness and Health in which he gives the following prescription.

"If you wyll caufe one to sleepe, then doe thus as foloweth :—Take ʒii of Henbane, ʒi of the rootes of Mandragora, vi of Popie, of Lettyce, Orpin, Houfleke, ana ʒii, the water Lilie one handfull, when they are beaten, let them be put in two pound of water of popie with

3i of the feede of Darnell for the fpace of two dayes and let them bee filled, and this is perfect."

Jerome of Brunswick in "The Vertuose Boke of Diftyllacion" 1527, says:

"The best parte and feafon of his dyftyllacyon is the herbe and the rotes ftamped and diftyllled in the ende of the may. The forehede, and the temples enoynted with the water of mandrake or dronken a lytyll of the fame cawfeth a body well to fleepe. The hede, the forehede and the temples enoynted with the fame water in the mornynge and at nyght the tyme of two or three dayes is good agaynst the payne in the hede comynge of hete. Water of mandrake flaketh all hete whan clowtes



FIG. 10.—A dog with its tail tied to the mandrake, from the Polish Herbal of Syrennius, Cracow, 1613.

be wet therin and layd upon the body two or thre dayes at eche tyme wet agayn two or thre tymes in a daye. A two or thre dowble clowtes wet in the fame water and wronge oute agayne a lytell and layd upon a paynefull place, it flaketh therwith bycause it is ftupefactyfe, that is it taketh away the felynge of the membres and therefore out of his one and proper nature and condycyon it flaketh all wofull paynes."

William Turner who was some time Dean of Wells published a herbal in 1551 and in it he says:

"There are two kindes of Mandrag, the black which is the female, which is called the letticer, with leffe leves and narrower than lettice

whiche have a ftrong favor, and are fpred upon ye grounde. And this kinde bereth apples lyke unto forapples, pale in coloure and well fmellyng, wherein is conteyned fede, lyke unto the kirkelles of peres. It hath rootes of a good bignes II or III, one foldyng itfelf within an other. They are black without and whyte within and they are covered with a thick barke. And thys kynde hath no ftalke. The other kynde is the white mandrag and it is called ye male. The leves of this are byg, white, brode and fmooth as the bete lefe is. The apples of thys are twyfe as byg as the apples of the other be, with a color turnyng toward faffron. They fmell plefantly joyned with a certayn grevounfnes. This kinde of mandrage I have oft tymes fene in England and it is ye



FIG. 11.—Mandrake from Colombini's Herbal, Padua, 1621.

herbe that we call comenly Mandrag. The rootes which are conterfited and made like litle puppettes and mammettes, which come to be fold in England in boxes with heir and fuch forme as a man hath are nothyng elles but folifhe feined trifles and not naturall. For they are fo trymmed of crafty theves to mocke the poore people withall and to rob them both of theyr wit and theyr money. I have in my tyme at diverfe tymes taken up the rootes of Mandrag out of the grounde, but I never faw any fuch thyng upon or in them as are in and upon the pedlers rootes that are comenly to be folde in boxes. "The Mandrag is named in Latin Mandragoras, in Dutch alram. It groweth only in gardines in England and in Germany but it is more comen in England then it is there. But it groweth not under galloffes as a certayn dotying doctor of Colon in hys phyfick lecture dyd tech hys auditores, nether doth it ryfe of the fede of man that falleth from hym that is hanged, nether is it called Mandragoras becaufe it came of mans fede as ye forfayd Doctor dremed.

The juyce of Mandrag dronken in the quantite of a scruple in honied wyne draweth furth Melancoly and fleme, by vomitynge after the maner of Helleborus, But if a man take to muche of it, it will kill hym. It is good to be menged with the medicines. Men use to take the barks of the frefhe rootes and to ftamp them and to prefke the juyce and to fet it in the fon untill it be growen hard, and then to put it by into erthen veffelles for to be ufed when nede fhall requyre. They use alfo to take of the bark of the roote and to put a threde throw it, and fo to hang it up, and afterwarde to use them. There is a juice alfo taken out of the apples, but that is not fo quick in operation as the other juice is. Som take the rootes and fet them in wine untill the thyrde part be foddren away and when the broth is purified kepe it and gyve one cyat or an once and an half of it to them that cannot flepe, and to them that are in great payn and to fuch as muft be burned or cut in fom place that they fhould not fele the burning or cuttyng.

“ Wyne may be made of ye roote of Mandrag without any fethyng after thys maner. The poundes of the rootes muft be put into a fmall firkin of fwete wyne, there they muft lye fo long together untill the vertue of the rootes is gone into the wyne. Ye may gyve iii cyates of thys wyne to them that muft be cut, burned or fered. If they drynk thys drynke they fhall fele no payne but they fhall fall into a forgetfull and a flepifhe drowfines. The apples, if a man fmell of them, will make hym flepe and alfo if they be eaten; and so doth the juice that is ftreyned out of them. But they that fmell to muche of the apples become dum. If ye will have the juice ye muft fcotche and pryck the rootes in many places and then fet veffelles under it and fave it. The juice that is preffed out is better then that which droppeth furth after cuttyng or fcotchyng. But that commeth not furth in every countre as experience teacheth us. Because thys herbe divers wayes taken is very jepardus for a man and may kill hym if he eat it or drynk it out of meafure and have no remedy for it. I will fhew yow alfo remedy agaynft the poyfon of it. If Mandrag be taken out of meafure, by and by, flepe infueth and a great loufyng of the ftreynge with a forgetfulnes. But before that cometh it were wifdome to vomite with mede and afterwarde to take nitre and womwod with fwete wyne or Maluafey, ye muft alfo poure vinegre and rofe oyle upon the patientes heade. It is good tho ftirr the body and to fmell of Agrimoni, peper, muftarde, coftorium and rue brused in vinegre. It is alfo good to fmell of tarr or of the ftyntyng that commeth from a candle that is put out. But if the patient cannot be eafily waked again, it is mete to use fuch other comen remedies.

“ Avicenna wold that they that are hurt with thys herbe should vomit with hony and butter. Whereas Diofcorides wolde that a mans heade should have Rofo oyle and vinegre poured upon it, when a man hath taken to muche of Mandrag. Matthiolus fayeth that it is agaynft reafon that it shuld be layd to the heade which is colde whenas the caufe of the difeafes alfo colde.”

Turner then gives a discussion between Diofcorides, Matthiolus and Galen and closes the discussion.

“ Now whether that fuch a forgetfull man as thys is ought fo boldely to chek anciant autores or no as he doth at diverfe tymes, let wyfe men and lerned be judges . . . Certayn of the ancientes or old men of Babylon have tolde me that a certayn mayde eat five Mandrag apples and that fhe fell in a fwowne and that fhe becam all rede and that a man commyng by at that tyme poured fnow water fo long upon her heade untill she rofe agayn.”

John Gerarde, who is described as Chirurgion to Her Majesty Queen Elizabeth, published the first edition of his famous (or infamous) herbal in 1597. It was enlarged and reprinted in two editions in 1633 and 1636 by Thomas Johnson, who gives Gerarde away in his introduction “To the Reader,” pointing out that Gerarde’s original herbal of 1597 was simply a pirated copy of Dr. Priest’s translation of the Dutch botanist Dodoens’ *Stirpium historiae pemptades sex*, which had been published in 1583. Dr. Priest, however, died before he could publish his translation and Gerarde published it without a word of acknowledgment, passing it off as his own. Gerarde gives the following account of the Mandrake :

“ The male mandrake hath great broad long fmoother leaves of a deepe greene colour, flat fpred upon the ground, among which come up the flowers of a pale whitifh colour, flanding every one upon a fingle fmall and weak foot-ftalk of a whitifh green colour, in their places grow round apples of a yellowifh colour, fmoother, fofter and glittering of a ftrong fmell, in which are contained flat and fmoother feedes in fafhion of a little kidney, like thofe of the Thorne apple. The roote is long, thick, whitifh, divided many times into two or three parts refembling the legs of a man with other parts of his bodie, as it hath beene reported, whereas in truth it is no otherwife then in the rootes of carrots, parfneps and fuch like, forked or divided into two or more parts, which nature taketh no account of. There have been many ridiculous tales brought up of this plant, whether of olde wives or fome runnagate furgeons or phyfickmongers, I know not (a title bad enough for them) but fure fome one or moe that fought to make themfelves famous in skilfull above others were the first brochers of that errour I fpake of. They adde further that it is never or verie feldome to be founde growing naturally but under a gallows, where the matter that hath fallen from the dead bodie hath given it the fhape of a man and the matter of a woman, the fubftance of a female plant, with many other fuch doltifh dreames. They fable further and affirm that he who woulde take up a plant thereof muft tie a dogge thereunto to pull it up, which will give a great fhrike at the digging up, otherwife if a man fhould do it, he fhould certainly die in fhort fpace after. Befides many fables of loving matters too full of fcurrilitie to fet foorth in print, which I forbear to fpeake of. All which dreames and old wives tales you fhall from hencefoorth caft out of your bookes and memorie, knowing

this that they are all and every part of them false and most untrue, for I myselfe and my fervants also have digged up, planted and replanted verie many and yet never could either perceive shape of man or woman. But the idle drones that have little or nothing to do but eate and drinke have bestowed some of their time in carving the roots of Brionie, forming them to the shape of men and women, which falsifying practise hath confirmed the error amongst the simple and unlearned people, who have taken them upon their report to be the true Mandrakes."

When Gerarde comes to deal with the "vertues" of the mandrake, he says:

"Dioscorides doth particularly fet downe many faculties heereof, of which notwithstanding there be none proper unto it, faving those that depende upon the drowfie and sleepeing power thereof, which qualitie consisteth more in the roote than in any other part. The apples are milder, and are reported that they may be eaten being boiled with Pepper and other hot spices. The juyce of the leaves is very profitable put into the ointment called *populeon* and all cooling ointments."

Tournefort in his herbal one hundred years later states that mandrake leaves enter as a chief ingredient in the ointment of poplar, but that the herb merchants commonly impose those of *Hyoscyamus luteus* or English tobacco instead and this is not so good. The *unguentum populi* of the Belgian Pharmacopeia contains belladonna, henbane and poplar buds. Gerarde ends his remarks:

"He that would know more heereof, may read that chapter of doctor Turner his booke, concerning this matter, where he hath written largely and learnedly of this simple."

Old Arab traditions state that the mandrake was used for various complaints that were attributed to demons and the forces of evil. It was said to cure lameness, cramp, epilepsy, insanity and loss of memory, and to afford protection against mishap of all sorts including theft and murder. The Arabs maintained that sometimes the dog survived the occasion and lived to pull up another mandrake. Hannibal, the Carthaginian general, is stated to have captured a large army of Africans by simulating a retreat and leaving behind him on the battlefield a number of jars of wine in which mandrake had been infused. The Africans drank the wine which reduced them to a condition of stupor and so the Carthaginians gained an easy victory. Caesar is also said to have used mandrake for a similar purpose. Joan of Arc is popularly supposed to have possessed a mandrake mannikin which she carried inside her dress hoping by its means to acquire riches. When questioned about it at her trial, she said that she had heard that it caused money to come, but that the voices that spoke to her had never said anything to her on the subject. On sundry occasions in the Middle Ages a woman has been burnt as a witch because she kept a puppet carved out of a root. In many countries roots from various species were carved to the shape of human figures and sold to the innocent and unsuspecting as genuine mandrakes. Apparently there was a great demand for them in England in the time of Henry VIII.

Many of you may have seen that the question was raised in the House of Commons recently of the genuineness of advertisements, and it was then stated by a member as an example that a pixie was advertised to be carried as a charm against evil, which is obviously absurd.

Modern science has shown that when all the folk-lore and witchcraft have been eliminated there still remains a basis for the use of the plant. In the late nineteenth century an alkaloid was isolated, which was given the name of mandragorine, and was later shown to be a mixture of hyoscyamine and hyoscine with a very small quantity of a third alkaloid.

This short account of what might be called a side-line of psychiatry has, I hope, shown you that our forefathers were not so very far wrong in some of their deductions, although the application of these to treatment was probably not altogether in the patients' interests; indeed one wonders just how many people died from the herbal remedy and not from their disease !
